

## ABSTRACT

A holographic multiplex recording method is provided in which remaining dynamic range in each recording area is made more uniform upon holographic multiplex recording. In this holographic recording method, a first-stage recording spot row  $RX_1$  is formed by arranging recording spots RS in an X-axis direction without overlapping, and then a second-stage recording spot row  $RX_2$  formed of the recording spots RS without overlapping in the X-axis direction is recorded in a position for shift multiplex recording in a Y-axis direction. This is repeated to form a Y-axis direction first multiplex recording spot matrix  $TYX_1$ . In this case, recording is performed to all recordable regions without shift multiplex recording in the X-axis direction. Subsequently, a Y-axis direction second multiplex recording spot matrix  $TYX_2$  is formed in a position shift-multiplexed in the X-axis direction with respect to the first-stage recording spot row  $RX_1$  initially recorded. The shift multiplex recording in the X-axis direction is performed in a similar manner up to a Y-axis direction last multiplex recording spot matrix  $TYX_n$  to thereby complete the recording.